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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,900	10/24/2003	Guo-Xin Jin	2002B148B/2	8713

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EXXONMOBIL CHEMICAL COMPANY  
5200 BAYWAY DRIVE  
P.O. BOX 2149  
BAYTOWN, TX 77522-2149

EXAMINER

PASTERCZYK, JAMES W

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/692,900

Applicant(s)

JIN ET AL.

Examiner

J. Pasterczyk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 18-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-22 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/14/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-17, drawn to a catalyst precursor, classified in class 502, subclass 167.
- II. Claims 18-20 and 22, drawn to a catalyst, classified in class 502, subclass 103.
- III. Claim 21, drawn to a method of polymerizing olefins, classified in class 526, subclass various depending on the cocatalyst.

2. The inventions are independent or distinct, each from the other because:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product, and the species are patentably distinct (MPEP § 806.05(j)). In the instant case, the intermediate product is deemed to be useful as a pigment for UV-visible light filters and the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

Inventions II and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h) and *Studiengesellschaft Kohle mbH v. Northern Petrochemical Co.*, 228 USPQ 837. In the instant case the process for using the product as claimed can be practiced with another materially different product, such as a supported metallocene.

Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions have

different effects, the former to filter UV light, the latter to make films and other structural materials.

3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

4. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained.

Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double

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patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

5. During a telephone conversation with Catherine Bell, Esq., on 5/19/06, a provisional election was made with traverse to prosecute the invention of group I, claims 1-17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 18-22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. The abstract of the disclosure is objected to because it refers to the purported merits of the invention while neglecting to include the structure of the transition metal compound of the catalyst. Correction is required. See MPEP § 608.01(b).

8. Claims 1-5 and 8-17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the transition metal of the catalyst compound being from groups 8 or 9, does not reasonably provide enablement for the transition metal being from groups 4-7, 10 or 11. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The eighteen electron rule would preclude compounds having the structure represented from having a central metal from groups higher than group 9, while electronic

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unsaturation in conjunction with the eighteen electron rule would preclude compounds having the structure represented from having a central metal atom from groups 7 or lower. The latter compounds would be too reactive to be stable, while the latter compounds simply would not be capable of existence as drawn since metal-ligand antibonding orbitals would be occupied by any electrons in the valence shell in excess of 18.

9. Claims 1, 3-6, 8-10, 13 and 15 are objected to because of the following informalities: in claim 15 change the initiators to singular and insert --an-- before "azo". In claim 13 insert --an-- before "alkyl styrene". In claims 8-10 insert --X-- after "abstractable ligands" and in claims 9 and 10 insert --the-- before "abstractable". In claim 8 delete the comma in the last line and insert --or-- before the last "hydrocarbyl-". In claim 6 change "8-9" to --8 or 9--. In claims 4 and 5, (a) and (b) of each, delete "groups". In claims 3-6 make "Each" all lower case. In claim 3 the suffixes on the R groups should be superscripted. In claim 1, l. 2, insert a comma after "initiator", and in (b) make "Each" all lower case. Appropriate correction is required.

10. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, part (b), delete "selected from" to make the language consistently closed Markush. Similarly, claims 2, 3, 6, 7 and 15 should be likewise amended.

In claim 3, part (a), insert --or-- before "phenyl".

Claim 5 fails to further limit claim 4 from which it depends; perhaps it should depend from claim 3 instead.

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In claim 11, the groups “methyl” through “tolyl” and “allyl” to the end are inconsistent with the recitation of claim 10.

Claims 15-17 fail to further limit composition claim 1 since claim 1 only requires the presence of a copolymerized transition metal compound and monomer; the identity of the free radical initiator is immaterial here, though in a process claim it would be material. Nevertheless, in claim 16 insert --the group consisting of-- after “selected from” and make the “or” in the last line --and--; claim 17 also needs the insertion of “selected from”.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-8 and 10-17 are rejected under 35 U.S.C. 102(b) as being anticipated by CN 1306012A (hereafter referred to as Liu).

Liu discloses the invention as claimed (English translation, p. 2, claim 1; p. 3 part 4); p. 8 parts 4)-6); application examples 18-21).

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu as cited above.

The disclosure of Liu has been discussed in paragraph 12 above.

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Liu lacks disclosure of the two abstractable ligands forming one metallacycle ring with the transition metal.

However, such ligands are conventional in the field of transition metal olefin polymerization catalysts since the hydrocarbyl versions can undergo deinsertion reactions with the transition metal, thus opening up a coordination site for an olefin to begin the olefin polymerization process.

It would have been obvious to one of ordinary skill in the art to apply that skill to the disclosure of Liu with a reasonable expectation of obtaining a highly-useful olefin polymerization precatalyst with the expected benefit of the precatalyst being easily activatable.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at 571-172-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
J. Pasterczyk

  
J. A. LORENGO  
SUPERVISORY PATENT EXAMINER